

**Original Article**

Histo-Pathological Evaluation in Cases of Hysterectomy Specimens in Tertiary Care Hospital at Muzaffarpur, Bihar

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Abstract

Objective: *This study was a prospective observational study. The aim of present study was to find out the most common Pathological cause of hysterectomy in tertiary care Hospital and incidence of hysterectomy in different age groups. It was also aimed to correlate the clinical, Pathological and radiological findings.*

Materials and Methods: *A total of 150 Patients of different age groups comes with different chronic complains in (Gynecology and obstetrics OPD) GOPD were studied. All patient after Pathological and radiological evaluation, undergone hysterectomy and all the specimens were received in the department for Histopathological examination.*

Result: *Out of 150 Patients, 72 (48%) Patients belongs to age groups of 40-49 years and 33(22%) cases belongs to age group of 30-39 Years. The most common presenting symptoms of patients undergoing hysterectomy was prolapse of uterus in 64 (42.6%) cases. Menorrhagia was the second most common complains in 57 (38%) cases. Most common clinical indication of hysterectomy was prolapse of uterus in 64 Patients (42.6%), Followed by Leiomyoma in 24 Patients (16%), carcinoma of cervix was found only in 1 patient (0.7%)*

The most common histopathological finding was atrophic/Proliferative/ Secretory endometrium in 64 Patients (42.6%) followed by adenomyosis in 32 (21.33%) cases and Leiomyoma in 27 (18%) cases.

Conclusion: *Histopathological evaluation of all cases of hysterectomy specimen were done. In most of the cases proper pathological cause and discussion of the condition of the women were not done due to various Pre-hysterectomy symptoms. Women abstain from work and routine duties. These problem can we avoided by proper diagnosis and treatment.*

Keywords: *Hysterectomy, Histopathological examination, DUB, Leiomyoma, Uterus.*

Introduction

The word hysterectomy has its origin from the Greek word 'hysteros', meaning uterus and 'ectomy' meaning removal. Hysterectomy, therefore means surgical removal of uterus. It is the most common non-pregnancy related major surgery performed on women world-wide. In November, 1843, Charles clay performed the first hysterectomy in Manchester, England. Abdominal

removal of uterus is known as Total abdominal hysterectomy (TAH) while removal of uterus by vaginal route is termed as vaginal hysterectomy (VH). It is a definitive treatment of pelvic pathology including fibroid, abnormal heavy bleeding, chronic pelvic pain, endometriosis, adenomyosis, uterine prolapse, pelvis inflammatory disease and cancer of reproductive organs. Since, the ultimate diagnosis is only on

histology, so every hysterectomy specimen should be subjected to histopathological examination.

Most of the abnormal uterine bleeding is caused by hormonal imbalance and it can be indicative of diseases including polyps, leiomyomas, endometrial hyperplasia and cancers of cervix and endometrium.

Dysfunctional uterine bleeding, fibroid uterus and adenomyosis are the common hyperestrogenic conditions where the endometrium is in proliferative phase and if untreated it may lead to endometrial carcinoma.

The importance of histopathological examination is seen, especially in patients with genital cancer, where the adjuvant treatment is dependent upon grade and extent of invasion of disease. The diagnosis of adenomyosis is established on histopathological examination, while dysfunctional uterine bleeding is a diagnosis of exclusion. Some of the patients may be suspected of having malignancy on pre-operative assessment eg. those with postmenopausal bleeding and histopathological examination may aid in ruling out this suspicion.

Radiological investigations are important for making clinical diagnosis before hysterectomy. There are various radiological investigations which could be done prior to hysterectomy to assist in making diagnosis. These are plain radiography, ultrasonography, computed tomography and magnetic resonance imaging. One of easily available, non invasive and relatively sensitive and cheap imaging technique is the use of ultrasound. Its sensitivity and specificity varies with different uterine pathology. This study was undertaken to know the pattern of uterine pathologies at hysterectomy in order to identify the most common uterine pathologies, and correlate them with their clinical indications, histopathological and radiological finding.

Materials and Methods

The Present Study was conducted in the department of Pathology, Sri Krishna Medical College, Muzaffarpur, with the help of obstetrics

and Gynecology Department during the period of October 2017 to April 2018. A total of 150 Patients of Different age groups with presenting of different Chronic Gynecological problems were evaluated. All patients were Clinically examined and after Pathological and Radiological tests they were undergone hysterectomy. All the specimens after hysterectomy were received in the Departments. After processing of specimens histopathological examination was done and were correlated Clinically and Radiologically.

Results

One hundred fifty hysterectomies specimens were distributed over a wide age ranging from 20 years to 80 years. Of this, 48% cases were encountered in 40-49 years which is the most common age group. 22% women were in age group of 30-39 years and 17.3% case were 50-59 years. The relationship between age and number of hysterectomies is illustrated in Table 1.

Table 1 Age Distribution of Patients Undergoing Hysterectomy

Age range	No. of Cases	Percentage
20-29	1	0.6 %
30-39	33	22%
40-49	72	48%
50-59	26	17.3%
60-69	15	10%
70-79	3	2%
Total	150	

Indications for hysterectomy varied from menstrual abnormalities to suspected pelvic malignancy. The various indications for hysterectomy are depicted in Table 2. Utero-vaginal prolapse was the most common pre-operative clinical diagnosis found in 64 (43%) cases, followed by uterine leiomyoma diagnosed in 24 (16%). Other clinical indications included dysfunctional uterine bleeding or DUB 23(15.3%), chronic pelvic pain 21 (14%), endometrial polyp 8 (5.3%) ovarian cyst & tumours 7 (4.6%). 2% hysterectomies were performed for malignant conditions which included carcinoma cervix and carcinoma ovary.

Table 2 Pre Operative Clinical Diagnosis For Hysterectomy

Clinical Diagnosis	No. of Cases	Percentage
Uterovaginal prolapses	64	42.6%
Leiomyoma	24	16%
Dysfunctional uterine bleeding	23	15.3%
Chronic pelvic pain	21	14%
Endometrial polyp	8	5.3%
Ovarian cyst and tumours	7	4.6%
Carcinoma ovary	2	1.3%
Carcinoma cervix	1	0.7%

The various symptoms that the patients presents undergoing hysterectomy are shown in Table 3.

Table 3 Symptoms of patients undergoing hysterectomy

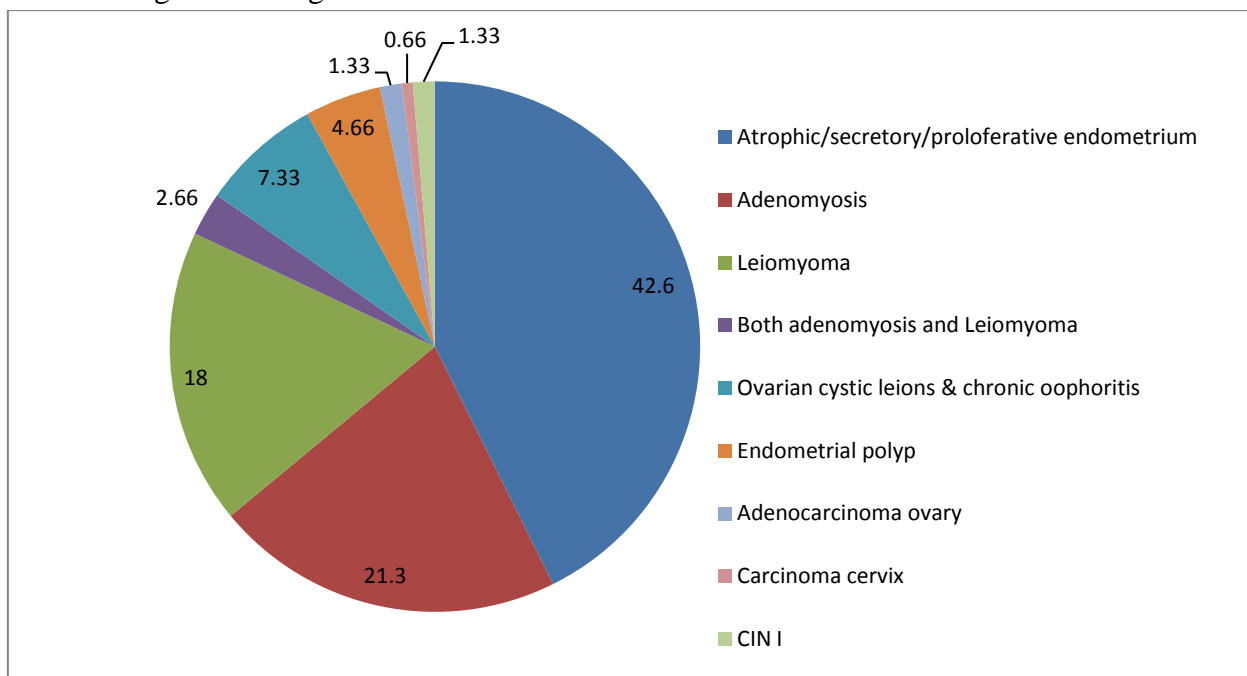
Symptoms	No. of cases	Percentage
Prolapse	64	42.6%
Menorrhagia	57	38%
Chronic pelvic pain	21	14%
Abdominal lump	6	4%
Post menopausal bleeding	2	1.3%

On histopathology, different pathologies was found. Hysterectomies done for utero-vaginal prolapse showed mostly atrophic or basal endometrium. Some showed endometrium in different phases like proliferative/secretory. In 43% of cases no any pathology was found. Adenomyosis was detected in 21.3% cases, followed by leiomyoma in 18% cases. Pattern of pathology in hysterectomy specimen were shown in Table 4.

Table 4

Histopathological findings	No. of cases	Percentage
Atrophic/secretory/proloferative endometrium	64	42.6%
Adenomyosis	32	21.33%
Leiomyoma	27	18%
Both adenomyosis and Leiomyoma	4	2.66%
Ovarian cystic leions & chronic oophoritis	11	7.33%
Endometrial polyp	7	4.66%
Adenocarcinoma ovary	2	1.33%
Carcinoma cervix	1	0.66%
CIN I	2	1.33%

Chart 4: Histological Finding



Correlation of Clinical, Radiological & Histopathological Findings

Clinically main indications for hysterectomy were prolapse (42.6%), followed by leiomyoma (16%).

Leiomyoma was found in 31 cases on histopathological examination but only 24 cases were detected radiologically. 7 cases were missed on ultrasonographic examination. Out of 23 cases,

clinically diagnosed as DUB, histopathological examination revealed leiomyoma in 6 cases, adenomyosis in 8 cases and endometrial polyp in 2 cases. Hence, after exclusion of organic pathology, DUB was confirmed in 7 cases.

Discussion

Hysterectomy is the most common gynecological surgery done in the females worldwide as it provides definitive cure to a wide range of gynecological diseases, both benign and malignant. The indications to perform this major surgery should always be justified and the pathology should be proved histopathologically. This is so because the hysterectomy is a major surgery which has its own physical, economic, emotional, sexual and medical significance to the women. Histopathological analysis and review is mandatory to evaluate the appropriateness of the hysterectomy.

In this study, 150 hysterectomies were done. The age of the patient studied in this present study ranged from 20 to 79 years, the mean age being 44.5 years. The age was higher when compared to the previous similar studies in which mean age was 45 years, by T. Ramachandran and 44.5 years by Karthikeyan et al. The likely explanation for this age variation is due to the higher incidence of prolapse and late presentation to the hospital for the concerned illness in the rural population studied.

The most common indication for the hysterectomy was uterovaginal prolapsed 42.6% cases which is comparable to study done by T. Ramachandran et al (31.6%). Fibroid uterus was the second most common indication (16%), however it was found to be the most common indication for the abdominal hysterectomy. This was in contrast with the previous studies in which the fibroid was the most common indication of hysterectomy in the patients study done by Shergill SK (34%) and Jha R et al.(24.9%)

Diagnosis of dysfunctional uterine bleeding (DUB) was made in 23(15.3%) cases. However, on histopathological examination, only 7 patients

had cystic glandular hyperplasia consistent with the diagnosis of DUB.

None of the cases of adenomyosis were confirmed pre operatively. This was in concordance with previous studies where the adenomyosis was the most missed out pathology preoperatively. Kumran Robert'J et al (94%) This indicates that the histopathology of the hysterectomy specimens is mandatory to confirm the pre-operative diagnosis and to justify the hysterectomy.

The commonest histopathological finding noted in the present study was atrophic / proliferative / Secretary endometrium (42%) but Leiomyoma was the most common histopathological finding in other studies done by T. Ramachandran et al, R.Jha, Saleh, Fram K, G.Gupta et al. Incidence of atrophic endometrium was due to the increased incidence of uterovaginal prolapse, which is commonly the pathology of the postmenopausal females.

Conclusion

Histopathological evaluation of hysterectomy specimens should be done in all cases of this major surgical procedure not only in tertiary care hospital but in all medical centers so that the proper Diagnosis and Treatment after any abnormal histopathological finding to be given to the patients as earlier as possible and save the life of a women.

References

1. Gray's anatomy: The anatomical basis of clinical practice. 40th ed. Spain: Churchill Livingstone, 2008: 1258-1259, 1254.
2. Kurman, edited by Robert J. (1994) Blaustein's Pathology of Female Genital Tract (4th ed.) New York, NY: Springer New York. 185-201.
3. Drake, Richard L.; Vogal, Wayne, Tibbits, Adam W.M. Mitchell; Illustrations by Richard; Richardson, Paul (2005). Gray's anatomy for students. Philadelphia, PA: Elsevier/Churchill Livingstone. 415,423.

4. Ovalle, William K; Nahirney, Patrick C.; illustrations by Frank H. Netter, contributing . illustrators, Joe Chovan... (et al) (2013). Female Reproductive system. Netter's Essential Histology (end ed.). Philadelphia, PA; Elsevier/Saunders, 416.
5. Langman's Medical Embryology, Lippincott Williams and Wilkins, 10th ed. 2006.
6. Ross M, Pawlina W (2011). Histology: A Text and Atlas (6th ed.) Lippincott Williams and Wilkins.
6. Young B, Lowe JS, Stevens A, Heath JW. Wheater's functional histology. 5th ed. Churchill Livingstone, 2006.
7. Hubert Guedj, Baggish, Michael S. Valle, Rafael Heliodoro (2007). Hysteroscopy: Visual perspectives of uterine anatomy, physiology and pathology. Hagerstwon, MD: Lippincott Williams and Wilkins. p.488.
8. Rose PG. Endometrial Carcinoma. N. Engl J Med. 1996, 335: 640-649.
9. Moll R, Levy R, Czernobilsky B, Hohlweg Majert P, Dallenbach Hellweg G, Franke WW. Cytokeratins of normal epithelia and some neoplasms of female genital tract. Lab Invest 1983, 49: 599-610.
10. Barwick KW, Livolsi VA, Malignant Mixed Mullerian tumours of uterus. Am J Surg Pathol 1979, 3: 125-135.
11. Dellers EA, Valente PT, Edmands PR, Balsara G. Mixed mesodermal tumours. An immunohistochemical study. Arch Pathol Lab Med 1991, 115: 918-920.
12. Christopherson WM, Williamson E0, Gray LA, Leiomyosarcoma of uterus. Cancer 1972, 29: 70-75.
13. Taylor HB, Norris HJ, Mesenchymal tumours of uterus IV, Diagnosis and prognosis of leiomyosarcomas. Arch Pathol 1966, 82: 40-44.
14. Moinfar E. Azod; M. Tavorsol, FA, Uterine sarcomas, Pathology 2007, 39: 55-71.
15. Ferry JA, Young RI I, Malignant lymphoma of genitourinary tract. Curr Diagn Pathol 1997, 4: 145-169.
16. Clement PB. Pathology of endometriosis. Pathol Annu 1990, 25: 245-295.
17. Bell DA, Ovarian surface epithelial — stromal tumours. Hum Pathol 1991, 22: 750-762.
18. Chaitin BA, Gershenson DM, Evans HL. Mucinous tumours of ovary. A clinicopathologic study of 70 cases. Cancer 1985, 55: 1958-1962.
19. Roth LM, Czernobilsky B. Ovarian Brenner, tumours. 11. Malignant. Cancer 1985, 56: 592-601.
20. Asadourian LA, Taylor HB, Dysgerminoma. An analysis of 105 cases. Obstet Gynecol 1969, 33: 370-379.
21. Thamil Sevil Ramachandran, Rammy Sinha, Subramaniam, Correlation between clinicopathological and ultrasonographic findings. Journal of clinical Diagnosis and Research 2011; 5(4): 734-740.
22. Dr. Karthikeyan T.M., Dr. Veena NN, Dr. Ajeeth Kumar CR, Dr. Eliz Thomes. Clinicopathological study of Hysterectomy among rural patients in a Tertiary care center, IOSR. Journal of Dental & Medical Sciences, vol.14, Issue 5 Ver. IV (May 2015), pp.25-27.
23. Shergill SK, Shergill HK, Gupta M, Kaur S. Clinicopathological study of hysterectomies J Indian Med Assoc. 2002; 100(4): 238-39.